

REMARKS

Applicant respectfully requests reconsideration of this application. Claims 1-24 are pending. No claims have been canceled or added. Claims 1, 4, 9, 12, 13, and 19 have been amended without introducing any new matter.

Interview Summary

Applicant wishes to thank the Examiner for the interview conducted on July 17, 2007. During the interview, Representative of Applicant and the Examiner discussed the references cited in the Office Action and claims 1 and 4. No agreement has been reached.

Objections Under 37 CFR § 1.75

Claims 10 and 11 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Accordingly, Applicant has amended claim 10 to overcome the objection. Withdrawal of the objection is respectfully requested.

Rejections Under 35 U.S.C. § 112

Claims 10-11 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Accordingly, Applicant has amended claim 10 to overcome the rejection. Withdrawal of the rejection is respectfully requested.

Rejections Under 35 U.S.C. § 103(a)

Claims 1-12 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,556,319 B2, of Feinberg et al (“Feinberg”), in view of U.S. Patent No. 6,898,376 B1, of Gerstel et al (“Gerstel”). Applicant respectfully traverses the rejection.

Claim 1 as amended sets forth:

outputting only one of the first and the second outgoing optical signals from the optical network node via a *switch*;
declaring a failure of the optical network node if only one of the first and the second outgoing optical signals has failed; and
maintaining a state of the switch if both of the first and the second outgoing optical signals have failed.

(Claim 1 as amended; emphasis added)

In contrast, neither Feinberg nor Gerstel, alone or in combination, teaches the above limitation. According to Feinberg, the optical system has two paths, namely, a service path and a protection path. If a processor determines that a service path is not operating normally, then the processor sends control signals to at least one of the last few line units on the second branch path (protection path), to instruct those line units to increase their power output levels to a normal power output state. (Feinberg, col. 3, ln. 60-67) Feinberg does not teach maintaining a state of a switch, via which only one of the two outgoing optical signals is output, if both of the outgoing optical signals have failed.

Likewise, Gerstel also fails to teach the above limitation. According to Gerstel, a second transponder is inhibited from outputting the second optical signal if the first transponder is outputting the first optical signal via a coupler. If not, the second transponder is not inhibited and the coupler outputs the second optical signal. (Gerstel, col. 2, ln. 26-31) Gerstel does not teach maintaining a state of a switch, via which only one of the two outgoing optical signals is output, if both of the outgoing optical signals have failed.

Since neither Feinberg nor Gerstel, alone or in combination, teaches all limitations set forth in claim 1 as amended, claim 1 as amended is patentable over Feinberg in view of Gerstel. Withdrawal of the rejection is respectfully requested.

For the reason discussed above with respect to claim 1, claim 9 as amended is patentable over Feinberg in view of Gerstel. Withdrawal of the rejection is respectfully requested.

Claims 2-8 and 10-12 depend, directly or indirectly, from claims 1 and 9, respectively. Thus, claims 2-8 and 10-12 are patentable over Feinberg in view of Gerstel for the reason discussed above with respect to claim 1. Withdrawal of the rejection is respectfully requested.

Furthermore, claim 4 as amended sets forth “declaring a *failure has occurred outside of the optical network node* if both the first and the second optical signals have failed.” (emphasis added). In contrast, neither Feinberg nor Gerstel, alone or in combination, teaches the above limitation. As discussed above, both Feinberg and Gerstel fail to address the situation in which both optical signals fail, let alone specifically teaching to declare a failure has occurred outside of the optical network node if both the first and the second optical signals have failed. Therefore, claim 4 as amended is patentable over Feinberg in view of Gerstel for this reason as well. Withdrawal of the rejection is respectfully requested.

For the reason discussed above with respect to claim 4, claim 12 is patentable over Feinberg in view of Gerstel. Withdrawal of the rejection is respectfully requested.

Rejections Under 35 U.S.C. § 103(a)

Claims 13-24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,307,653, of Bala et al (“Bala”), in view of U.S. Patent No. 6,477,288 B1, of Sato (“Sato”). Applicant respectfully traverses the rejection. Claim 13 as amended sets forth:

a plurality of optical signal switches, each of the plurality of the optical signal switches coupled to one of the first plurality of output ports and one of the second plurality of output ports, to select a first output optical signal from the first optical equipment, wherein a respective optical signal switch switches to select a second output optical signal from the second optical equipment if the first output optical signal fails and the second output optical signal has not failed, and *the respective optical signal switch remains unchanged if both the first output optical signal and the second output optical signal fail*, wherein the plurality of optical signal switches are switched together substantially simultaneously.

(Claim 13 as amended; emphasis added)

In contrast, neither Bala nor Sato, alone or in combination, teaches the above limitation. According to Bala, the optical matrix protection system includes an Nx1 optical switch 210, which selectively connects one of its N inputs to its single output. The single output of the Nx1 optical switch 210 is further coupled to a 1xN optical switch 212, which selectively connects its single input to one of N outputs. But neither of the switches 210 nor 212 remains unchanged if both output optical signals fail. (Bala, Figure 3, col. 4, ln. 1-12) Therefore, Bala fails to teach that the respective optical signal switch remains unchanged if both the first output optical signal and the second output optical signal fail.

Likewise, Sato also fails to teach the above limitation. Sato discloses an optical line switching system comprising an optical switch. The optical switch comprises a plurality of unit optical switches and a common driving mechanism that is configured to perform simultaneously switching operation of the unit optical switches to alter the switching state of the optical switch. (Sato, col. 4, ln. 47-51) Sato does not teach that the respective optical signal switch remains unchanged if both the first output optical signal and the second output optical signal fail.

Since Bala and Sato, alone or in combination, fail to teach all limitations set forth in claim 13 as amended, claim 13 is patentable over Bala in view of Sato for at least this reason. Withdrawal of the rejection is respectfully requested.

For the reason discussed above with respect to claim 13, claim 19 as amended is patentable over Bala in view of Sato. Withdrawal of the rejection is respectfully requested.

Claims 14-18 and 20-24 depend, directly or indirectly, from claims 13 and 19, respectively. Thus, claims 14-18 and 20-24 are patentable over Bala in view of Sato. Withdrawal of the rejection is respectfully requested.

CONCLUSION

Applicant respectfully submits that the objections and rejections have been overcome by the remarks and the amendments, and that the pending claims are in condition for allowance. Accordingly, Applicant respectfully requests the objections and the rejections be withdrawn and the pending claims be allowed.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. If any other petition is necessary for consideration of this paper, it is hereby so petitioned.

If there are any additional charges, please charge Deposit Account No. 02-2666 for any fee deficiency that may be due.

Respectfully submitted,

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